Abstract

A shared storage distributed file system is presented that provides users and applications with transparent access to shared data stored on network attached storage devices by utilizing layering techniques to inherit file management functionality from existing file systems. The present invention stores meta-data for the shared data as real-data in a standard, non-modified, client-server distributed file system, such as NFS. In effect, the standard client-server file system acts as a meta-data server. The name space consisting of inode files stored as real-data on the meta-data server acts as the name space for the shared data. Similarly, file attributes of the inode files are utilized as the file attributes of the shared data. By utilizing an existing client-server system as the meta-data server, development time and complexity are greatly reduced, while speed advances in the underlying client-server system may be incorporated without alteration of the present invention. A method for communicating with network attached storage devices over layered file systems is also presented.